Recombinant Mouse FABP1/L-FABP

Catalog Number: 9467-CL

DESCRIPTION

Source	*E. coli*-derived Met1-Ile127 Accession # P12710
N-terminal Sequence Analysis	Met1
Predicted Molecular Mass	14 kDa

SPECIFICATIONS

SDS-PAGE	12 kDa, reducing conditions
Activity	Bioassay data are not available.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity not tested

The Innovator Series. R&D Systems proteins are almost always sold with a bioassay to indicate activity. However, we recognize that sometimes proteins might be novel, and their bioactivity may not be well understood. In addition, some researchers may wish to use polypeptides to make antibodies. To facilitate the advancement of new science, we now offer our Innovator Series of proteins.

BACKGROUND

Fatty acid binding proteins (FABP) are small cytoplasmic lipid binding proteins that are expressed in a tissue specific manner and are involved in intracellular lipid transport. All FABPs bind free fatty acids, cholesterol, and retinoids, which differ in their selectivity, affinity and binding mechanism (1). Circulating FABP levels are used as indicators of tissue damage. Some FABP polymorphisms have been associated with disorders of lipid metabolism and the development of atherosclerosis (2). FABPs are structurally conserved, consisting of a water-filled, ligand-binding pocket surrounded by ten anti-parallel beta-barrel structures, capped by an N-terminal helix-turn-helix motif. The helical N-terminus is involved in the regulation of FA transfer from membranes (3).FABP1, also known as liver FABP (L-FABP) is highly expressed in the liver, intestine, kidney and lung (1). FABP1 binds free fatty acids and their co-enzyme A derivatives. FABP1 is unique among other members in FABP family, attributed to its ability to bind multiple ligands at once. It has a larger solvent-accessible core in comparison to other FABPs, and this allows for more diverse binding to substrates (1). Mouse FABP1 is 127 amino acids (aa) in length. It is a two beta-sheet molecule that contains an acetylated initiating methionine. Full-length mouse FABP1 shares 94% and 84% aa identity with rat and human FABP1, respectively (4).

References:

1. Smathers, R. *et al.* (2011) Hum. Genomics. **5(3)**:170.
2. Furuhashi, M. *et al.* (2008) Nat. Rev. Drug Discov. **7(6)**:489.
3. Storch, J. *et al.* (2010) J. Biol. Chem. **285(43)**:32679.
4. Martin, G. *et al.* (2013) Biochemistry **52(51)**:9347.

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